Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**1.** Mike, Shannon, Layla, and Rachel each recorded the grades they received on five tests in their math class in the table below.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Student** | **Test Scores** | | | | |
| **Test 1** | **Test 2** | **Test 3** | **Test 4** | **Test 5** |
| **Mike** | 80 | 70 | 67 | 86 | 58 |
| **Shannon** | 84 | 72 | 71 | 76 | 80 |
| **Layla** | 79 | 78 | 77 | 70 | 71 |
| **Rachel** | 81 | 71 | 66 | 77 | 76 |

What is the range of the student's scores?

|  |  |  |
| --- | --- | --- |
|  | **A.** | 31 |

|  |  |  |
| --- | --- | --- |
|  | **B.** | 25 |

|  |  |  |
| --- | --- | --- |
|  | **C.** | 29 |

|  |  |  |
| --- | --- | --- |
|  | **D.** | 28 |

**2.** What is the median of the following set of numbers?

**109, 171, 183, 117, 226, 152, 161, 139, 198, 211**

|  |  |  |
| --- | --- | --- |
|  | **A.** | 171 |

|  |  |  |
| --- | --- | --- |
|  | **B.** | 117 |

|  |  |  |
| --- | --- | --- |
|  | **C.** | 167.5 |

|  |  |  |
| --- | --- | --- |
|  | **D.** | 166 |

**3.** In Mrs. Roberge's fifth grade class, the students are measuring and recording their heights. The heights of five girls and five boys in the class are recorded in the table below.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Students' Heights** | | | | | |
| **Girls** | 50 inches | 47 inches | 51 inches | 47 inches | 50 inches |
| **Boys** | 46 inches | 50 inches | 49 inches | 44 inches | 46 inches |

Which statement best describes the means of the two sets of data?

|  |  |  |
| --- | --- | --- |
|  | **A.** | The mean of the girls' heights is 2 inches greater than the mean of the boys' heights. |

|  |  |  |
| --- | --- | --- |
|  | **B.** | The mean of the boys' heights is 2 inches greater than the mean of the girls' heights. |

|  |  |  |
| --- | --- | --- |
|  | **C.** | The mean of the girls' heights is 2 times greater than the mean of the boys' heights. |

|  |  |  |
| --- | --- | --- |
|  | **D.** | The mean of the girls' heights is the same as the mean of the boys' heights. |

**4.** What is the upper quartile, Q3, of the following data set?

43, 43, 30, 52, 56, 67, 27, 64, 34, 59, 43, 19, 39, 47, 22

|  |  |  |
| --- | --- | --- |
|  | **A.** | 56 |

|  |  |  |
| --- | --- | --- |
|  | **B.** | 61 |

|  |  |  |
| --- | --- | --- |
|  | **C.** | 43 |

|  |  |  |
| --- | --- | --- |
|  | **D.** | 52 |

**5.** What is the median of the following set of numbers?

**42.3 , 41 , 35 , 41 , 36.7 , 33.7 , 38 , 43.3 , 32.7**

|  |  |  |
| --- | --- | --- |
|  | **A.** | 35 |

|  |  |  |
| --- | --- | --- |
|  | **B.** | 42.3 |

|  |  |  |
| --- | --- | --- |
|  | **C.** | 41 |

|  |  |  |
| --- | --- | --- |
|  | **D.** | 38 |

**6.** What is the lower quartile, Q1, of the following data set?

55, 53, 53, 57, 57, 66, 51, 63, 53, 59, 57, 44, 53, 57, 47

|  |  |  |
| --- | --- | --- |
|  | **A.** | 60 |

|  |  |  |
| --- | --- | --- |
|  | **B.** | 57 |

|  |  |  |
| --- | --- | --- |
|  | **C.** | 46 |

|  |  |  |
| --- | --- | --- |
|  | **D.** | 53 |

**7.** Robert and Blake are both competitive hot dog eaters. The results of the last seven hot dog eating competitions are listed below.

|  |  |
| --- | --- |
| Robert: | 5, 8, 4, 9, 3, 5, 6 |
| Blake: | 15, 10, 17, 7, 14, 14, 11 |

How does the interquartile range of the number of hot dogs Blake ate compare to the interquartile range of the number of hot dogs Rob ate?

|  |  |  |
| --- | --- | --- |
|  | **A.** | Blake's interquartile range is one hot dog greater than Robert's interquartile range. |

|  |  |  |
| --- | --- | --- |
|  | **B.** | Blake's interquartile range is one hot dog less than Rob's interquartile range. |

|  |  |  |
| --- | --- | --- |
|  | **C.** | Blake's interquartile range is equal to Rob's interquartile range. |

|  |  |  |
| --- | --- | --- |
|  | **D.** | Blake's interquartile range is two hot dogs greater than Rob's interquartile range. |

**8.** Kathleen has gathered all of her test scores for the semester. As a comparison, she asked her friend Joey for her test scores and put them into the table below.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Test Scores** | | | | | | | | |
| **Kathleen** | 53 | 67 | 74 | 45 | 79 | 63 | 65 | 66 |
| **Joey** | 70 | 82 | 80 | 66 | 90 | 73 | 70 | 48 |

How does the range of Kathleen's test scores compare to the range of Joey's test scores?

|  |  |  |
| --- | --- | --- |
|  | **A.** | The range of Kathleen's scores is greater than the range of Joey's scores by 8 points. |

|  |  |  |
| --- | --- | --- |
|  | **B.** | The range of Kathleen's scores is less than the range of Joey's scores by 12 points. |

|  |  |  |
| --- | --- | --- |
|  | **C.** | The range of Kathleen's scores is greater than the range of Joey's scores by 6 points. |

|  |  |  |
| --- | --- | --- |
|  | **D.** | The range of Kathleen's scores is less than the range of Joey's scores by 8 points. |

**9.** What is the lower quartile, Q1, of the following data set?

48, 44, 31, 60, 65, 74, 29, 71, 36, 67, 52, 22, 40, 56, 25

|  |  |  |
| --- | --- | --- |
|  | **A.** | 66 |

|  |  |  |
| --- | --- | --- |
|  | **B.** | 31 |

|  |  |  |
| --- | --- | --- |
|  | **C.** | 65 |

|  |  |  |
| --- | --- | --- |
|  | **D.** | 68 |

**10.** George made the table below that shows how far his family members and coworkers travel to get to work.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Family** | 7 mi. | 15 mi. | 18 mi. | 22 mi. | 30 mi. | 34 mi. | 37 mi. | 38 mi. |
| **Coworkers** | 10 mi. | 15 mi. | 19 mi. | 27 mi. | 30 mi. | 36 mi. | 36 mi.</font. | 42 mi. |

What is the difference between the lower quartile of the distances to work for George's family members and the upper quartile of the distances to work for George's coworkers?

|  |  |  |
| --- | --- | --- |
|  | **A.** | 19.5 mi. |

|  |  |  |
| --- | --- | --- |
|  | **B.** | 28 mi. |

|  |  |  |
| --- | --- | --- |
|  | **C.** | 25.5 mi. |

|  |  |  |
| --- | --- | --- |
|  | **D.** | 29 mi. |

**11.** A company conducted a survey of 6,205 people to find out the fastest speed they have driven in certain cities. Based on the table below, what is the difference between sample's interquartile range and the population's interquartile range?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name | Minimum | 1st Quartile | 2nd Quartile | 3rd Quartile | Maximum |
| Macon | 68 | 86 | 90 | 101 | 111 |
| Augusta | 67 | 78 | 95 | 105 | 113 |
| Decatur | 73 | 82 | 83 | 95 | 107 |
| Jefferson | 73 | 89 | 86 | 107 | 115 |
| Population | 66 | 76 | 96 | 106 | 123 |

|  |  |  |
| --- | --- | --- |
|  | **A.** | There is a difference of 8.75. |

|  |  |  |
| --- | --- | --- |
|  | **B.** | There is a difference of 15.4. |

|  |  |  |
| --- | --- | --- |
|  | **C.** | There is a difference of 14.75. |

|  |  |  |
| --- | --- | --- |
|  | **D.** | There is a difference of 11.75. |

**12.** What is the interquartile range of the following data set?

422, 492, 516, 552, 536, 446, 469

|  |  |  |
| --- | --- | --- |
|  | **A.** | 114 |

|  |  |  |
| --- | --- | --- |
|  | **B.** | 492 |

|  |  |  |
| --- | --- | --- |
|  | **C.** | 90 |

|  |  |  |
| --- | --- | --- |
|  | **D.** | 130 |

**13.** What is the interquartile range of the following data set?

33, 37, 40, 43, 42, 35, 36

|  |  |  |
| --- | --- | --- |
|  | **A.** | 7 |

|  |  |  |
| --- | --- | --- |
|  | **B.** | 40 |

|  |  |  |
| --- | --- | --- |
|  | **C.** | 35 |

|  |  |  |
| --- | --- | --- |
|  | **D.** | 9 |

**14.** What is the mode of the following set of numbers?

**64.8, 55, 28, 64.8, 55, 106.67, 55, 118, 28, 118**

|  |  |  |
| --- | --- | --- |
|  | **A.** | 28 |

|  |  |  |
| --- | --- | --- |
|  | **B.** | 64.8 |

|  |  |  |
| --- | --- | --- |
|  | **C.** | 55 |

|  |  |  |
| --- | --- | --- |
|  | **D.** | 118 |

**15.** Jim made the graph below to compare the boxes of paper sold by salespeople in his branch in Akron to the boxes of paper sold by salespeople in the national corporation to which his branch belongs.

How does the upper quartile of boxes sold in Akron compare to the lower quartile of boxes sold nationally?

|  |  |  |
| --- | --- | --- |
|  | **A.** | The upper quartile of boxes sold in Akron is three times as large as the lower quartile of boxes sold nationally. |

|  |  |  |
| --- | --- | --- |
|  | **B.** | The upper quartile of boxes sold in Akron is less than the lower quartile of boxes sold nationally. |

|  |  |  |
| --- | --- | --- |
|  | **C.** | The upper quartile of boxes sold in Akron is greater than the lower quartile of boxes sold nationally. |

|  |  |  |
| --- | --- | --- |
|  | **D.** | The upper quartile of boxes sold in Akron is in the same range as the lower quartile of boxes sold nationally. |

**16.** What is the range of the following set of numbers?

**42.11, 39.51, 51.91, 54.91, 48.51, 42.51, 39.11, 51.91, 36.11**

|  |  |  |
| --- | --- | --- |
|  | **A.** | 15.8 |

|  |  |  |
| --- | --- | --- |
|  | **B.** | 45.18 |

|  |  |  |
| --- | --- | --- |
|  | **C.** | 18.8 |

|  |  |  |
| --- | --- | --- |
|  | **D.** | 54.91 |

**17.** What is the range of the following set of numbers?

**41.5, 31.8, 45.2, 39.5, 35.8, 37.5, 33.8, 47.2, 33.8**

|  |  |  |
| --- | --- | --- |
|  | **A.** | 38.46 |

|  |  |  |
| --- | --- | --- |
|  | **B.** | 47.2 |

|  |  |  |
| --- | --- | --- |
|  | **C.** | 15.4 |

|  |  |  |
| --- | --- | --- |
|  | **D.** | 13.4 |

**18.** Every year the county fair holds a grape-eating contest. The numbers of grapes eaten by thirteen contestants in 30 seconds are listed below.

69, 62, 81, 85, 82, 71, 72, 76, 66, 57, 67, 69, 81

What is the interquartile range of the set of data?

|  |  |  |
| --- | --- | --- |
|  | **A.** | 14.5 |

|  |  |  |
| --- | --- | --- |
|  | **B.** | 14 |

|  |  |  |
| --- | --- | --- |
|  | **C.** | 28 |

|  |  |  |
| --- | --- | --- |
|  | **D.** | 15 |

**19.** Matt and Linda each start the year with 15 vacation days. The table below shows how many vacation days each of them had left at the end of each quarter.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Jan. - Mar.** | **Apr. - June** | **July - Sept.** | **Oct. - Dec.** |
| **Matt** | 12 | 10 | 7 | 4 |
| **Linda** | 14 | 10 | 9 | 0 |

What is the difference between the interquartile ranges of Matt's remaining vacation days and Linda's remaining vacation days?

|  |  |  |
| --- | --- | --- |
|  | **A.** | 0.7 days |

|  |  |  |
| --- | --- | --- |
|  | **B.** | 1 day |

|  |  |  |
| --- | --- | --- |
|  | **C.** | 2 days |

|  |  |  |
| --- | --- | --- |
|  | **D.** | 6 days |

**20.** What is the mean of the following set of numbers? [Round the answer to the hundredths place if needed.]

**8, 8.65, 3, 9.92, 9, 27, 6.89, 15**

|  |  |  |
| --- | --- | --- |
|  | **A.** | 8 |

|  |  |  |
| --- | --- | --- |
|  | **B.** | 12.49 |

|  |  |  |
| --- | --- | --- |
|  | **C.** | 27 |

|  |  |  |
| --- | --- | --- |
|  | **D.** | 10.93 |